

# KESHEQUA CENTRAL SCHOOL

"EXCELLENCE IN RURAL EDUCATION"



## TECHNOLOGY IMPLEMENTATION PLAN

2007 - 2010

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# INTRODUCTION

This Plan is a guide in our journey through the 21st century. As technology changes, so will the needs of our students and the need to keep our curriculum current and alive. Our hope is that Keshequa will be a District

***whose facilities are*** well equipped, easily accessible to students, faculty, administration & the community, and housed with current technology;

***whose staff is*** well versed, literate, and excited about technology;

***whose students are*** all achieving the district goals of being continuous learners, responsible citizens, problem solvers, cooperative individuals, and effective communicators, and who have the technical competencies to compete in both the workplace and the world at large; and

***whose reputation is*** that of a motivating, innovative, disciplined institution that provides only the best to its students and community.

# PLANNING PARTICIPANTS

In an effort to provide as broad a representation as possible, each school year the different Technology Teams will seek volunteer representation from the areas indicated.

## District Technology Team

Superintendent  
Technology Coordinator  
Director of Curriculum & Instruction  
Elementary Team Representative  
MS/HS Team Representative(s)  
Community Representative(s)

## Dalton Technology Team

Technology Coordinator  
Dalton Principal  
Director of Curriculum & Instruction  
Elementary Librarian  
Special Areas Rep  
Kindergarten Rep  
1<sup>st</sup> Grade Rep  
2<sup>nd</sup> Grade Rep  
3<sup>rd</sup> Grade Rep  
4<sup>th</sup> Grade Rep  
5<sup>th</sup> Grade Rep  
Special Education Rep

## MS/HS School Technology Team

Technology Coordinator  
MS/HS Principal  
Director of Curriculum & Instruction  
MS/HS Librarian  
Fine Arts Rep  
Middle School Rep  
High School Rep  
Foreign Language Rep  
Special Education Rep  
Guidance Dept Rep  
Athletic Dept Rep

## MISSION STATEMENT

The purpose of this Implementation Plan is to describe the role and use of technology in achieving the District educational goals established for students as outlined in the District Strategic Plan (*a copy of which is attached hereto as Appendix A*), as well as the District technological goals. Students are to become:

1. ***Continuous Learners*** - will demonstrate steady growth on standardized tests as compared to other students in schools across the state, nation and BOCES, teacher assessments, alternative assessments and/or the achievement of personal and vocational goals;
2. ***Problem Solvers*** - will use their experiences, knowledge and skills to solve real life problems in a variety of situations;
3. ***Cooperative Individuals*** - will be able to work effectively with others of diverse backgrounds in a variety of learning/working situations to achieve common goals; and
4. ***Effective Communicators*** - will express their knowledge, ideas, needs, feelings and creativity through listening, speaking, writing, reading, technology, and the arts.

**We believe that using computers and technology  
to assist in meeting these goals  
will create adults who will be  
productive members of their community, their workplace,  
and of society in the 21st century.**

# TECHNOLOGY BENEFITS

Students access to and mastery of different technologies will:

- ◆ enable them to become active, independent learners
- ◆ provide “student-centered”, individualized learning situations
- ◆ heighten motivation
- ◆ prepare them for the future job market
- ◆ afford them an appreciation of diversity
- ◆ widen global learning opportunities
- ◆ increase their productivity
- ◆ give them access to more information

Teachers access to and mastery of different technologies will:

- ◆ provide them with information on demand
- ◆ increase their productivity and efficiency
- ◆ allow them to become part of a global community sharing ideas and data
- ◆ give them more direct contact with peers in their content area
- ◆ afford them individualized instruction
- ◆ allow them to be more comfortable and familiar with current and developing technology

District Staff access to and mastery of different technologies will:

- ◆ provide them with information on demand
- ◆ increase their productivity and efficiency in conducting any and all business matters of the district
- ◆ enable them to improve communication venues

Community Member access to different technologies will:

- ◆ provide them with information on demand
- ◆ allow them to become an informed part of the budget process
- ◆ give them feedback as to how their tax dollars are being used with regard to technology advancements in the support of the district’s curriculum

# TECHNOLOGY ACQUISITION HISTORY

“In the beginning...” moneys from numerous outside sources and the district were used to purchase on an as-needed-basis various brands, models and types of computers, software and peripherals. As the years progressed, so did our acquisition of equipment. Following is a brief description of how we came to have and use our current equipment:

## During the 1980's:

Throughout this time, computers, printers and various software titles were purchased.

The first District Computer Committee was formally organized in 1984 under the direction of Superintendent Helena Squicciarini. These Committees dealt with such issues as placement of computers, hardware and software acquisition, and teacher training. Reacting to changing technology and obvious needs, the Computer Committee would make recommendations to the Administration.

In the Dalton Building, these computers were utilized as stand alone workstations. In 1989 an Apple Iigs computer lab was established and formalized instruction in keyboarding for third graders began.

In the Nunda Building, these computers were utilized to design a Business/Keyboarding Lab and an Apple IIe & Iigs Computer Lab. This Apple Lab was originally housed in the library, but was later moved to its own location with a full-time aide.

## 1993-1994 School Year:

Formalized future planning began to take place under Superintendents Barry Schoenholz and Bren Price and the first District Technology Plan was developed (*a copy of which is attached hereto as Appendix B*).

Under this plan the Dalton building would change from an Apple/MAC platform to the DOS/IBM platform. In the Nunda building, the Business Lab should be updated to house more current technology. Twenty (20) Hewlett Packard-IBM clone machines were received through a grant and networked together in order to share 4 printers (hereinafter referred to as the “Business Lab”).

### ADMINISTRATIVE LAN:

In Nunda an Administrative server and host were purchased with seven (7) workstations networked to it, with six (6) printers.

In Dalton two(2) workstations with two(2) printers could remotely dial-in to this Administrative LAN over a 14.4 modem.

#### 1994-1995 School Year:

During the school year two additional LANs were established in the District. These Instructional LANs were established under the Library Automation CoSer through Wayne-Finger Lakes Genesee Valley BOCES and installed in each building.

##### INSTRUCTIONAL LAN:

In Dalton an instructional server was purchased with fourteen (14) Hewlett Packard-IBM clone workstations networked, sharing three (3) printers. Eight workstations were housed in the Computer Lab, five workstations were housed in the Library and the remaining workstation was used as the circulation desk for the Library.

In Nunda an instructional server was purchased with fourteen (14) Hewlett Packard-IBM clone workstations networked, sharing three (3) printers. Eight workstations were housed in the Apple Computer Lab, five workstations were housed in the Library and the remaining workstation was used as the circulation desk for the Library.

During this same time various computers were purchased by the District for specific uses, including:

##### In Nunda:

- ◆ An IBM PS/1 was purchased by the Computer Committee.
- ◆ A computer from the Business Lab was donated to an Earth Science class. A modem and software were purchased to enable the teacher to have access to current weather satellite information.
- ◆ The BETA project was begun with the purchase of two PowerMac computers and various software packages and peripherals. d
- ◆ For the development of our yearbook, a computer, software and printer were given to the school by the vendor.

In the spring of 1995 the Nunda Computer Committee made recommendations to Superintendent Price with regard to a "High School Computer Plan" (*a copy of those recommendations are attached hereto as Appendix C*), with the number one recommendation being that the Computer Committee carry out Phase II of the 1993-1994 District Technology Plan.

##### ADMINISTRATIVE LAN:

Three (3) additional workstations and printers were purchased for connection to the LAN for the Superintendent, his Secretary and the Elementary Principal.

### 1995-1996 School Year:

#### STAFF CHANGE:

With the increase in the amount of equipment the District was purchasing, and in an effort to insure the staff's understanding and use of this equipment, the part-time position of District Computer Trainer was established.

To establish a "starting point" for staff training a Computer Knowledge Survey was distributed to each building staff.

#### INSTRUCTIONAL LAN:

In Dalton, the server underwent a hard drive expansion and twenty-two (22) more workstations were networked, with twelve being housed in the Computer Lab, two being placed in the training area (Mr. Warren's Room) and one in each of the fifth and sixth grade classrooms. The Apple computers previously housed in the Lab were reallocated to various classrooms.

In Nunda, the server underwent a hard drive expansion and twenty-two (22) more workstations were networked for placement in the Computer Lab (hereinafter referred to as the "IBM Lab") and the Business Lab was connected to increase the size of the Local Area Network (LAN). The Apple computers previously housed in the Lab were reallocated to various classrooms.

Additionally, a district license was purchased for WinGuard v2.3 and a LAN license for GIS v17 for Nunda.

Specific recommendations for upgrades to the current systems were also submitted and Board approved (*a copy of those upgrade recommendations are attached hereto as Appendix D*).

#### ADMINISTRATIVE LAN:

The server underwent a RAM upgrade and two additional workstations were added for the Business Manager and the Account Clerk.

Additionally, a 2-user license for MSOffice Pro v4.3 was purchased for the Business Manager and the Account Clerk.

### 1996-1997 School Year:

#### STAFF CHANGE:

During the school year the Computer Trainer position was upgraded to the full-time district position of Coordinator of Computer Services and the position of Computer Lab Trainer/Technician was also created and filled.

The Technology Committee was then bestowed with the task of developing a comprehensive Technology Implementation Plan for all future technology purchases. Information for this plan was gathered in a variety of ways, including

surveys which were distributed in an effort to obtain input as to the direction this plan should take, as well as information as to the current uses of technology within the classrooms.

#### INSTRUCTIONAL LAN:

In Dalton, five (5) additional workstations were purchased and placed in the Computer Lab; MSWorks v3.0 was selected as the software standard with the purchase of a 40-user license; various machines were upgraded; access to the Internet was made available to all teachers through WYCOL on a single upgraded PC; and a data projector was purchased and installed in the Computer Lab.

In Nunda, one (1) workstation was added to the network (replacement for a workstation given to the Administrative network for the Director of Food Services); the Novell and ICLAS licenses were increased to 100-users; various machines were upgraded; MSWorks v3.0 53-user license for the LAN; MSOffice Pro v4.3 26- user license for the Computer Lab; a single classroom connection to the LAN was established (Rm 213) and access to the internet was made available to all teachers through WYCOL on a single upgraded PC.

Additionally, anti-virus protection was initiated with InnocuLAN v4.0 server and InnocuLAN v4.1 workstation.

#### ADMINISTRATIVE LAN:

The server was replaced and the LAN was increased by three (3) workstations (Director of Food Services, Payroll Clerk and Secretary to CSE Chairman) and three (3) printers. A cross connection to the Instructional LAN was also made.

Additionally, all accounting procedures were begun in-house with the purchase of CP-Accounts Payable, Budget and Fixed Assets modules; anti-virus protection was initiated with InnocuLAN v4.0 server and InnocuLAN v4.1 workstation; and the MSOffice Pro license was increased to 4-users.

#### 1997-1998 School Year:

This was a very exciting year in the District for instructional technology. During this year the District initiated a WFL-GV BOCES pilot with the installation of the Compaq/Dynacom Multimedia Distribution System. A headend room with all source equipment and a twelve (12) classroom Fiber WindowsNT connection was purchased, wired and installed in both Dalton and Nunda. (*An inventory and mapping of all pilot hardware is attached hereto as Appendix E*)

#### INSTRUCTIONAL LAN:

In Dalton, a flatbed scanner and color printer was purchased and installed in the Library. Internet access continued at the single access point.

In Nunda, in an effort to increase the capacity of the Business Lab, all computers underwent a RAM upgrade. Additionally, a digital camera and a flatbed scanner

were also purchased and installed in the IBM Lab. The LAKENet connection was made and internet access was made available from all workstations on the Instructional LAN. We also saw an upgrade to GIS v3.0 for Windows for the LAN.

Additionally, “The Chronicle” (the District newsletter) was written by all district departments, produced by BETA and printed via DocuShare.

**ADMINISTRATIVE LAN:**

The LAN was increased by three (3) workstations for the Superintendent, Business Manager and Director of Transportation; the Athletic Director inherited a workstation; and all existing LAN workstations were upgraded with additional RAM, WIN95 and MSOffice Pro v.4.3 licensing. The LAKENet connection was made and internet access was made available from all workstations on the Instructional LAN.

Additionally, the CP-Payroll Module was implemented, as well as the NutriKids Analysis program for our Food Services Department.

1998-1999 School Year:

With the previous years multimedia pilot installation, the majority of the 1998-1999 school year was devoted to training, staff development and “debugging” of the system. Additionally, the district began planning a \$27million capital project. Technology upgrades would be a large part of this project. *(A complete copy of the Division 17 Technology Educational Plan for this capital project is attached hereto as Appendix F)*

1999-2000 School Year:

This year saw the beginning of our construction and capital project implementation. Due to the vast amount of physical construction needed, technology implementation outside of the project was temporarily halted.

2000-2001 School Year:

This year saw the continuation of the physical construction and implementation of the technology plan. All funded aspects of Division 17 of the capital project were installed, tested and full use began on a case-by-case basis.

**INSTRUCTIONAL LAN:**

In Dalton, multimedia access points were furnished in all instructional areas, the computer lab was also fully equipped and all headend equipment was installed. *(complete As-Builts are attached hereto as Appendix G)*

In Nunda multimedia access points were furnished in all instructional areas, the middle school computer lab was also fully equipped and all headend equipment was installed. (*complete As-Builts are attached hereto as Appendix G*)

ADMINISTRATIVE LAN:

The business office upgraded to Finance Manager 2000 and all required workstation upgrades took place as well.

2001-2002 School Year:

STAFF CHANGE:

With the completion of the technology part of our capital project it became evident that technical support would be necessary for the large number of computers & peripherals that were installed. We contracted with WFL BOCES for the shared position of SrCSA.

INSTRUCTIONAL LAN:

With the technology construction phase of the capital project finally completed, the majority of this school year was spent on staff development.

Topics Included:

- Communication Via Email
- New Phone System with Voice Mail Capabilities
- Multimedia Functionality
- Network Utilization (home directories & common folders)
- Teaching With Server Applications

ADMINISTRATIVE LAN:

This school year saw the migration from Schoolmaster for DOS to Schoolmaster for windows. Various hardware purchases took place in order to accomplish this, including the purchase of a new NT 4.0 Server.

We also put into operation various DocuCenters. These fast-speed copier/scanner/faxing devices were networked with office personnel users, while others were “walk-up” machines.

2002-2003 School Year:

With budget constraints being extremely tight this year, there was very little available for new technology purchases. This year we did see however, a change at our Dalton cafeteria facility with the installation of the Horizon Fastlane Point of Sale System.

This was also the first full-year of our website presence. Our website consists of pages for District Information, Dalton Elementary Information, Middle School

Information and High School Information. *(a copy of the Web Site Board Policy is attached hereto as Appendix H).*

INSTRUCTIONAL LAN:

The only additional hardware purchases for this school year were various printing scenarios.

ADMINISTRATIVE LAN:

The only hardware purchases for this school year were the replacement of office personnel workstations.

2003-2004 School Year:

STAFF CHANGE: In an effort to give the district additional technical support, we contracted with WFL BOCES for the addition of a shared CSA position.

With equipment budget constraints being again extremely tight this year, there was very little available for new technology purchases. This year we did see however, the purchase of replacement computers for the 1998 Dynacom pilot teacher workstations.

INSTRUCTIONAL LAN:

Dells running MS Windows XP were purchased, together with various network and shared printers to replace the pilot teacher workstations.

ADMINISTRATIVE LAN:

Various upgrades to our FM 2000 financial package were installed, together with a test run of MS Server 2003 (with MS Windows NT being discontinued by the vendor, another network OS scenario will need to be considered).

2004-2005 School Year:

STAFF CHANGE:

With a greater number of teachers now integrating the available technology into their classroom curriculums, the district created and hired a teaching assistant for the Nunda MS/HS building.

This year we were fortunate enough to be able to begin funding of our 5-year computer hardware cycle. *(a copy of which is attached hereto as Appendix I)*

INSTRUCTIONAL LAN:

Networked Dells running MS Windows XP were purchased, together with a high capacity laser printer for use in our Middle School Lab. The current equipment was reallocated to various classrooms throughout the district.

Networked Dells running MS Windows XP were purchased, together with a high capacity laser printer for use in our Office Practice Lab. The existing computers were moved to our elementary school to equipment our ELA/Kindergarten computer lab.

Networked Dells running MS Windows XP were purchased, together with a high capacity color laser printer for use in our High School Art lab.

ADMINISTRATIVE LAN:

The Microsoft Server 2003 continued to be tested, with the installation of an in-house SUS server.

We also took advantage of our new network capabilities by programming various users direct access to our DocuCenter printers.

2005-2006 School Year:

STAFF CHANGE:

With the district being awarded the Reading First grant, and technology being an integral part of this program, we again contracted with WFL BOCES for a third shared technical support position. The position of Net Analyst I was filled. Additionally, a second Teaching Assistant position was created for Dalton elementary.

INSTRUCTIONAL LAN:

Networked Dells running MS Windows XP were purchased, together with a color laser printer for our elementary computer lab. The current equipment was reallocated to classrooms throughout the district.

Replacement teacher workstations were installed in various middle school classrooms. The current equipment was reallocated to classrooms throughout the district. Additionally, new power stations were purchased to upgrade our CAD lab and numerous laser printers were installed.

ADMINISTRATIVE LAN:

With the successful testing of Microsoft Server 2003 having been completed, the district upgraded its servers in the Nunda building and added an in-house email server running Microsoft Exchange.

This year we also began testing a digital video recording scenario for our camera surveillance system.

# SECURITY

The security of all our systems must be the top priority and maintained at all times. Since time and funds are limited it is critical to determine what the security risks are, develop preventive measures and examine potential costs of a violation. All three areas of security will be governed by the District's Acceptable Use Policy and the District's Internet Content Filtering Policy (*copies of which are attached hereto as Appendix J*). Technology security issues can be broken down into four categories:

1. Physical Security;
2. Network Security;
3. Data Security; and
4. Internet Security

## Physical Security

This area deals with keeping our hardware safe from vandalism and theft. Most problems in this area are the same as those of any valuable, portable equipment owned by the District.

MEANS: Careful inventory and control procedures for the equipment are essential.

## Network Security

This area deals with keeping our network scheme safe, accurate and virus free. It must be understood by all users of our system that the use of our system is a **privilege** and **not a right**. The safety of our networks greatly depends on the integrity of its users and those who disregard others safety will be dealt with.

MEANS: eTrust Anti-Virus & Windows Defender are the standard and strict adherence to the Acceptable Use Policy will be enforced.

## Data Security

This area deals with keeping software and user files secure from unauthorized access and modification. When students are using any workstations with access to confidential information (such as grades, evaluations, test or the Internet), it is imperative that they do so under supervised and monitored conditions.

MEANS: An accurate backup system must be maintained in the event of a security breach.

## Internet Security

This area deals with the security of our internet access. Information exchanges with unknown entities is prohibited and access to sites with little or no educational value are screened.

MEANS: All workstations on our network will be routed through the Bess Proxy Server for content filtering.

IMPLEMENTATION PLAN: DALTON BUILDING

**KESHEQUA  
CENTRAL SCHOOL**

**KESHEQUA  
ELEMENTARY SCHOOL**

**TECHNOLOGY  
IMPLEMENTATION PLAN**

**2007 - 2010**

# INVENTORIES

## CURRENT SOFTWARE TITLES

Following is a list of the most widely used software titles:

Accelerated Reader	MS Paint
Bailey's Book House	MS Publisher
Cartopedia CD-ROM	Number Munchers
Clock Works	Ocean Explorers CD-ROMS
Coin Critters	Online Public Access Catalog (OPAC)
Encarta CD-ROM	PAWS Typing Town
Explorapedia CD-ROM	Preschool Parade
History of the World CD-ROM	Reader Rabbit 1
How the Body Works CD-ROM	Reader Rabbit 2
I Spy	Reader Rabbit – Reading Builder
Inspiration	Reader Rabbit - Ready for Letters
Jumpstart Kindergarten CD-ROM	Sammy's Science House
Jumpstart First Grade CD-ROM	Timeliner
Jumpstart Second Grade CD-ROM	Type for Fun
Kid Pix	Type to Learn
Kid Works2	Type to Learn Assessment
Kidpiration	US Atlas CD-ROM
Knowledge Munchers	Various interactive storybooks
Lexia Phonics	Various on-line sources
Major League Math	Word Munchers
Master Guru	World Atlas CD-ROM
Math Rabbit	World of Nature CD-ROM
Millie's Math House	World of Science CD-ROM
MS FrontPage	Worksheet Magic
MS Office 2003 Pro	Zoo Explorers CD-ROM

**DALTON HARDWARE INVENTORY**  
**(Per NYS BEDS day 2006)**

Classroom or Science Lab	161
Technology Labs	47
Library	5
Administrative	12
Other	9
<b>TOTAL</b>	<b>234</b>

## CURRICULAR GOALS: GRADES K-5

Following is a representation of our Elementary Objectives for the District Technology Goals as they align with State Learning Standards and District Curricular Objectives.

These current schemes are just the beginning of our District's integration of technology. It is our belief that once basic technology skill levels are mastered, the curriculum will become *infused* with technology and specific integration plans are obsolete.

It will be the responsibility of the Dalton Technology Team to review these goals on an annual basis with the following questions in mind:

- What Do We What Our Students To Learn?
- How Do We Know They Have Learned It?
- What Will We Do When They Have Not?
- What Will We Do When They Have?

# **Keshequa Central School District Dalton Elementary Computer Technology Curriculum**

## **INTRODUCTION**

The New York State Education Department outlines the content and skills students should learn in school. The Mathematics, Science, and Technology (MST) Learning Standards are found all within a single document. This MST document has seven standards; three of these are the “CONTENT” standards, while the other four standards focus on the “process” of learning the content.

- Standard 1 - Analysis, Inquiry & Design
- Standard 2 - Information Systems
- Standard 3 - MATHEMATICS
- Standard 4 - SCIENCE
- Standard 5 - TECHNOLOGY
- Standard 6 - Common Themes
- Standard 7 - Interdisciplinary Problem Solving

Each of these standards has specific Key Ideas with detailed Performance Indicators. Additionally, within each standard there are three distinct levels: Elementary (K-4), Intermediate (5-8), and Commencement (9-12). The New York State Education Department does not however, distinguish at what specific grade levels the content and related skills are to be taught.

The goal of the Keshequa Elementary Computer Program is to develop student technology skills while integrating computer technology with the K-5 instructional process.

We believe that a computer technology curriculum framework that delineates the skills that students should master by the time they leave the elementary school is essential for equitable computer instruction for all of our students. This document provides our district with a curricular “blueprint” for instructional technology that also helps us justify our hardware expenditures, software selections and staff development plans.

# COMPUTER TECHNOLOGY CURRICULUM FRAMEWORK

The Elementary Computer Curriculum Framework has been developed to address these issues by establishing objectives for students at each grade level. Computers are powerful and creative instructional tools that can enhance learning most effectively when they are integrated with the classroom curriculum. All students must develop proficient information technology skills as a prerequisite for future academic and professional success. The technology objectives in this document are driven and drawn from recommendations made by New York State's "Long Range Plan for Technology in Elementary and Secondary Education," the "New Compact for Learning," and the English, Social Studies, and Math, Science and Technology curriculum frameworks.

## **Objective #1**

Basic Operations and Concepts

## **Objective #2**

Social, Ethical and Human Issues

## **Objective #3**

Technology Productivity Tools

## **Objective #4**

Technology Communication Tools

## **Objective #5**

Technology Research Tools

## **Objective #6**

Technology Problem-Solving &  
Decision-Making Tools

# Objective #1

## Basic Operations & Concepts

Students will learn basic computer operations and become proficient in the use of technology.

		Grade	Level			Performance Indicators
K	1	2	3	4	5	<i>These indicators apply to all students and are often extended in subsequent grade levels.</i>
x	x	x	x	x	x	1. Identify and use input (mouse, keyboard) and output (monitor, printer) devices to operate computer systems.
x	x	x	x	x	x	2. Understand and use basic keyboard (return, delete, shift, space bar) and mouse functions (point, click, drag).
x	x	x	x	x	x	3. Log onto a network and use icons to launch and operate software and CD-ROM applications.
		x	x	x	x	4. Understand and apply basic file management concepts such as opening, saving and printing files.
			x	x	x	5. Use individual account names and passwords to log onto a network and manage files in a personal folder.
			x	x	x	6. Develop proper keyboarding technique using both hands and all fingers for fluent data entry.
				x	x	7. Understand and use multiple applications simultaneously, navigate between them, and copy and paste data.
					x	8. Introduce peripherals (scanner, digital camera, external drive) as a way to add functionality to a computer system.

## Objective #2

### Social, Ethical and Human Issues

Students will learn about ethical issues related to technology,  
develop positive attitudes that support collaboration and personal productivity,  
and learn and practice responsible technology use.

		Grade	Level			Performance Indicators
K	1	2	3	4	5	<i>These indicators apply to all students and are often extended in subsequent grade levels.</i>
x	x	x	x	x	x	1. Work cooperatively and collaboratively with peers on technology-related projects.
x	x	x	x	x	x	2. Understand appropriate online behavior.
	x	x	x	x	x	3. Develop proper netiquette and learn basic Internet safety rules
				x	x	4. Discuss the strengths and weaknesses of the Internet as a medium and learn how to use it in a productive manner.

## Objective #3

# Technology Productivity Tools

Students will use technology tools to enhance learning, increase productivity and promote creativity.

		Grade	Level			Performance Indicators
K	1	2	3	4	5	<i>These indicators apply to all students and are often extended in subsequent grade levels.</i>
x	x	x	x	x	x	1. Use computer software and CD-ROMs to support and integrate technology with the curriculum.
x	x	x	x	x	x	2. Create original graphics and use clip art in drawing and painting programs to illustrate concepts and ideas.
		x	x	x	x	3. Apply computers to the writing process using word processing software and functions.
			x	x	x	4. Enhance written work by appropriately & creatively manipulating font, size, color & type.
				x	x	5. Use spreadsheet tools and graphing programs to analyze and represent numerical data.
				x	x	6. Use graphical organizers to brainstorm ideas and organize learning concepts.

## Objective #4

# Technology Communications Tools

Students will collaborate with peers and experts using multimedia and telecommunications tools to develop, publish and communicate information and ideas effectively to multiple audiences.

		Grade	Level			Performance Indicators
K	1	2	3	4	5	<i>These indicators apply to all students and are often extended in subsequent grade levels.</i>
		x	x	x	x	1. Use presentation software to develop slideshows that incorporate text, graphics and sound.
				x	x	2. Further enhance presentations hyperlinked text, graphics, and adding animation & transitions.
					x	3. Introduce docushare as an application that facilitates communication, collaboration, discussion and debate

## Objective #5

# Technology Research Tools

Students will develop research skills using technology to locate, evaluate and collect information from a variety of sources.

		Grade	Level			Performance Indicators
K	1	2	3	4	5	<i>These indicators apply to all students and are often extended in subsequent grade levels.</i>
	x	x	x	x	x	1. Use CD-ROM references to develop research skills for content area learning.
			x	x	x	2. Use online encyclopedias and provided Internet web sites to access information for research assignments.
				x	x	3. Develop Internet search strategies which will enable efficient evaluation of online information.
					x	4. Find appropriate Internet web sites for research assignments, with limited direction.

## Objective #6

# Technology Problem-Solving and Decision-Making Tools

Students will develop strategies and use technology resources for solving problems and making informed decisions.

		Grade	Level			Performance Indicators
K	1	2	3	4	5	<i>These indicators apply to all students and are often extended in subsequent grade levels.</i>
				x	x	1. Select and use a variety of technology tools and resources to solve a particular interdisciplinary problem.
					x	2. Evaluate the accuracy, relevance and bias of electronic sources for curriculum-based research assignments.

# ELEMENTARY ACTION PLANS

## Goal No. 1:

Now that our capital project has been completed, we need to provide all students and staff members' maximum access to the network by the purchase of additional hardware.

### **Hardware Strategies**

The Dalton Technology Team will develop a prioritized plan for the purchase and maintenance of all technology hardware within the building.

### **Staff Development Strategies**

Staff development should continue until such time as the entire faculty and staff have mastered basic technology understandings and skills as measures on a "Basic Competency Evaluation".

### **Budget**

To be funded by local hardware and BOCES funds.

## Goal No. 2:

To assist in preparing our students for further educational experiences and real life situations, our elementary curriculum map should be reviewed annually.

### **Hardware Strategies**

All current technology equipment, and any additional purchases, will be aligned with this curriculum. These purchases will follow the prioritized table outlined earlier.

### **Software Strategies**

- a. Any applicable titles for the peripherals purchased.
- b. More reference material, of various content areas, grade levels and media types should be made available for all to use.
- c. More content area related software packages to supplement and reinforce classroom curriculum should be made available.

### **Staff Development Strategies**

- a. A system of staff development needs to be built. Additionally, opportunities to see what other districts and facilities are doing should be made available. (*see Appendix K*)

### **Budget**

To be funded by local district and BOCES funds

Goal No. 3:

To know whether or not our elementary students are leaving with the necessary computer skills for middle school, an assessment tool will need to be created.

**Hardware Strategies**

All current technology equipment, and any additional purchases, will be aligned with the elementary computer curriculum. All equipment will be made accessible to all our students.

**Software Strategies**

- a. Research any tools that may already exist and test their applicability.
- b. Purchase any valid titles.

**Staff Development Strategies**

Staff development strategies will be put into place once a curriculum and assessment tool have been decided upon.

**Budget**

To be funded by local district and BOCES funds

IMPLEMENTATION PLAN: NUNDA BUILDING

**KESHEQUA  
CENTRAL SCHOOL**

**KESHEQUA  
MIDDLE & HIGH SCHOOL**

**TECHNOLOGY  
IMPLEMENTATION PLAN**

**2007 - 2010**

# INVENTORIES

## CURRENT SOFTWARE LIST

Following is a list of the most widely used software titles both on our network and on stand alone machines:

Adobe Creative Suites  
Digital Juice  
Fast Traxx  
Hyperstudio  
Inspiration  
Kidpiration  
Lexia Reading Evaluation Series  
MicroType  
MiniTab Statistics  
MS Frontpage  
MS Office 2003 Pro  
MS Publisher  
Online Public Access Catalog (OPAC)  
Print Music  
Punch! Architectural Design  
SIRS Researcher  
Studio MX  
Union Online Public Access Catalog  
Timeliner  
Video Game Development  
Visual Studio  
Worksheet Magic

**NUNDA HARDWARE INVENTORY**  
**(Per NYS BEDS day 2006)**

Classroom or Science Lab	84
Technology Labs	125
Library	11
Administrative	27
Other	8
<b>TOTAL</b>	<b>255</b>

## TECHNOLOGY OFFERINGS

There are numerous course offerings with regard to technology available at the Middle and High School level. Some examples include:

1. College Offerings

Various college level courses, including but not limited to English, Statistics, Western Civilization & Cell Biology.

2. Computer 9/10 (Electronic Information Processing)

This is an intermediate computer course that gives the students the opportunity to develop the technological skills required for the world of work. Computer applications using MS Office software will prepare students for both success at Keshqua Central, as well as down the road in entry level work or post secondary education.

3. Computer 11/12 (Office Practice & Web Design)

A full year hands on computer course that includes more advanced computer software applications. Students will use the Internet for business. HTML is taught for a section and then MS Frontpage is used to design web pages that could be used for e-commerce.

4. Communication Systems I & II:

Gives students a wide and fundamental view of many disciplines which make up the field of communications. Subjects include screen printing, computer graphics, audio, video and print.

5. Graphic Arts I & II:

These classes offer projects that reflect layout & design, simple video production & editing, digital printing, screen printing and stained glass

6. CAD:

This course is designed around the use of computers in creating mechanical and architectural drawings.

7. Digital Photography:

Digital Photography is quickly becoming the new and most creative way to capture an image without the worry & cost of film. This course explores the most common digital camera components & the fundamentals of using the digital cameras.

In addition to these specific offerings, there are numerous instances in which technology is already being used in the classrooms. Some examples include:

- In the Learning Centers and Resource Rooms, student practice their math, spelling and science skills. A teacher notes that students “greatly prefer computer review to any other type of review”.
- An interdisciplinary writing assignment was initiated between an English 7 and Social Studies 7 teachers. This assignment was produced on a word processor, with a picturesque cover page designed by the students.
- A 7th Grade English teacher added the use of Powerpoint presentation software to her existing oral report requirement.
- An 8th grade Social Studies teacher incorporates technology in a variety of ways. In addition to drill and practice, remediation and review, word processing and databases, computers are used to collect, analyze and present data in new ways. For example, students create and analyze graphs dealing with the Civil War and classroom presentations are enhanced through the use of laser discs and hyperstudio programs.
- Some ninth grade global studies classes receive their homework assignments from their teacher via the computer network and each is responsible to complete the assignment on a word processor.
- Tenth grade Biology students are beginning to use computers in laboratory write-ups and the construction of charts and graphs associated with lab activities.
- A senior English class completes forms (designed by their teacher and distributed to them via the network) for all their book, film and periodical reviews.

## CURRICULAR GOALS: GRADES 6 - 12

In the Keshequa Middle & High School the strategy is to directly integrate technology skills into the core curricular areas. We believe this approach will assist our students in making the real world connection of the importance of technological skills.

Students will be able to successfully use technology as a tool to:

- ◆ Access information from a variety of sources
- ◆ Evaluate information
- ◆ Manipulate and synthesize information
- ◆ Communicate and implement this “knowledge” through a variety of media

Following are the exit outcome goals desired in a graduate from Keshequa Central:

GOAL NO. 1:

The student will have the knowledge and skills to be able to use technology as a tool for both personal and professional pursuits.

GOAL NO. 2:

Students will have the technical knowledge and skills that empower them to solve problems, complete a task and/or create a product within a required time frame.

GOAL NO. 3

Students will demonstrate their capability to access information, collect data and communicate electronically.

GOAL NO. 4:

Students will demonstrate their understanding of the relationship between academic subjects and a variety of technological media.

Having achieved a certain mastery level by the Elementary School, students are expected to continue their technological progression in the Middle and High Schools. Following are some recommended benchmarks. Specific curriculum integration will be developed on a departmental level and will be added to and become a part of this Plan.

# MIDDLE & HIGH SCHOOL ACTION PLANS

## Goal No. 1:

Now that our capital project has been completed, we need to provide all students and staff members' maximum access to the network by the purchase of additional hardware.

### **Hardware Strategies**

The Dalton Technology Team will develop a prioritized plan for the purchase and maintenance of all technology hardware within the building.

### **Staff Development Strategies**

Staff development should continue until such time as the entire faculty and staff have mastered basic technology understandings and skills as measures on a "Basic Competency Evaluation".

### **Budget**

To be funded by local hardware and BOCES funds.

## Goal No. 2:

To assist in preparing our students for further educational experiences and real life situations, a more defined technology curriculum should be developed.

### **Hardware Strategies**

All current technology equipment, and any additional purchases, will be aligned with this curriculum. These purchases will follow the prioritized table outlined earlier.

### **Software Strategies**

- a. Any applicable titles for the peripherals purchased.
- b. More reference material, of various content areas, grade levels and media types should be made available for all to use.
- c. More content area related software packages to supplement and reinforce classroom curriculum should be made available.

### **Staff Development Strategies**

- a. A system of staff development needs to be built. Additionally, opportunities to see what other districts and facilities are doing should be made available. (*see Appendix K*)

### **Budget**

To be funded by local district and BOCES funds

### Goal No. 3

To assist in providing access to information on demand, provide more individualized student-centered opportunities and prepare students for real life work situations, our facilities need to be equipped with more up-to-date technology.

#### **Hardware Strategies**

- a. Mobile Multimedia Cart: complete with workstation, TV monitor, projection devise, scanner, digital camera & color printer for use in any area of the building.
- b. Peripherals such as a laptop computer or “mini computer” (eg. Dreamwriter) should be housed and made available to students and staff.

#### **Software Strategies**

- a. Any applicable titles for the peripherals purchased.
- b. More reference material, of various content areas, grade levels and media types should be made available for all to use.
- c. More content area related software packages for classroom supplementation and reinforcement should be made available in the lab.

#### **Staff Development Strategies**

- a. A system of staff development needs to be built in and made a part of our current class schedules. Additionally, opportunities to see what other districts and facilities are doing should be available.

#### **Budget**

To be funded by local district and BOCES funds

## PLAN EVALUATION PROCESS

A yearly review of the Action Plans will take place mid-year of each plan year by the each Technology Team to determine whether or not revisions and/or alterations of the goals, strategies and action plans should take place.

Additionally, subsequent phases will be determined by ongoing curriculum development and what is decided to be the relevant hardware, software, application and staff development needs.

During each of these phases, the following criteria will be used to determine our needs:

- ◆ Does the plan align with district curricular goals?
- ◆ Is the plan cost-effective?
- ◆ Does the plan require a further review of current technology systems?
- ◆ Is the plan grade/age/user level appropriate?
- ◆ Are there any other district plans that supersede this plan?

# **Appendix A**

## **District Strategic Plan**

# **Appendix B**

## **First District Technology Plan**

# **Appendix C**

**March 13, 1995 Memo  
Regarding Recommendations for High School Computer Plan**

# **Appendix D**

**1996-1997 BOCES Bid for Upgrades**

# **Appendix E**

## **1998 Compaq/Dynacom Map (PILOT) and Inventory List**

# **Appendix F**

## **Capital Project Division 17 Educational Plans**

# **Appendix G**

## **Project As-Builts**

# **Appendix H**

## **Board Approved District's Web Site Policy**

# **Appendix I**

## **District & Level Acquisition & Maintenance Plans**

## **SOFTWARE & HARDWARE PROJECTIONS**

Each year the various Technology Teams will solicit requests for software and hardware. These requests will be reviewed and prioritized based on the previously established criteria indicated below.

The final recommendations for hardware, software purchasing and ongoing maintenance will follow the five-year cycle also indicated.

### **SOFTWARE PURCHASE PLAN**

**(Amount Determined By State Aid Figures  
or \$20 Per Student, Which Ever Is Greater)**

Each year the software funds available would be divided between the 3 buildings, Elementary, Middle School & High School, based on building student population. (Example: Year 2004-2005 Elementary Student Population of 420 would equal \$8,400)

First priority for the expenditure of these funds will be any district wide software needs. Any balance thereafter would be allocated as follows:

The respective Building Technology Committees would accept software title requests from faculty and make purchase recommendations to the District Technology Committee.

Should there be a balance of software funds available in any one building, requests would then be accepted from any other district personnel and the Building Committees would then made further recommendations to the District Technology Committee.

**HARDWARE PURCHASE PLAN**  
**(District Funds Coded as Hardware & Boces)**

<b>Year</b>	<b>District Labs (\$50,000)</b>	<b>Elementary Classrooms (\$50,000)</b>	<b>MS Classrooms (\$50,000)</b>	<b>HS Classrooms (\$50,000)</b>	<b>Headend Rooms (\$25,000)</b>
Year 1	Dalton Art & Music	24 Pilots & Grade 5	Art & Music	TV Studio & Radio Station	PDC & BDC Servers
Year 2	MS CAD & Tech Lab	Grade 4, Library & PE	English, Home & Careers	English and Foreign Lang.	Safari Servers & Guidance Dept.
Year 3	Elementary Lab	Grade 3 & 2	Social Studies & Science	Social Studies & Science	Business Lab
Year 4	MS LAB	Title I, Grade 1 & Kindergarten	Math, Title I, PE & Library	Math, Title I, PE & Library	Telephone/Voice Mail Servers
Year 5	HS LAB	Administrative & Special Ed Personnel	Administration & Special Ed Personnel	Administration & Special Ed Personnel	Schoolmaster & Finance Manager

Each year hardware funds will be prioritized as indicated above. The respective Building Technology Committee will accept hardware requests based on these priorities and make purchase recommendations to the District Technology Committee.

Should there be a balance of hardware funds available in any one building, requests would then be accepted from any other district personnel and the Building Committees would then made further recommendations to the District Technology Committee.

# **Appendix J**

**Board Approved Acceptable Use Policy  
Board Approved Internet Content Filtering Policy**

# **Appendix K**

## **District Professional Development Plan**